

# ESSENTIAL GLOBAL INSIGHTS INTO THE ESCALATING PLASTIC CRISIS

The OECD report projects global plastics consumption rising from 460 million tonnes in 2019 to 1,231 million tonnes by 2060<sup>1</sup>. The report also highlights that plastic leakage to the environment is expected to double to 44 million tonnes annually by 2060.

Southeast Asia is one of the regions most impacted by excessive plastic consumption and insufficient waste management systems. Rivers in these countries are among the leading contributors to ocean plastic pollution<sup>2</sup>.

Moreover, the OECD report highlights the significant concern regarding microplastics, such as synthetic polymers measuring less than 5 mm in diameter, originating from industrial plastic pellets, textiles, and tire wear. Microplastics have been detected in the human body, including the lungs, placenta, and bloodstream<sup>3 4</sup>. Seafood is a significant source. Still, microplastics are also found in other foods, as well as in water and air. These particles can carry toxic substances like PFOS (Perfluorooctane sulfonate), PBDEs (Polybrominated diphenyl ethers), and Bisphenol A, known as immunotoxic, neurotoxic, and endocrine disruptors<sup>5 6</sup>. According to the OECD report, the share of plastic waste that is successfully recycled is expected to rise to 17% by 2060, up from 9% in 2019. However, a significant portion of plastic waste will still end up in landfills or be incinerated.

In addition to the physical plastic pollution caused by increasing plastic production and inadequate recycling, the use of toxic chemicals such as decaBDE (Decabromodiphenyl ether), PFAS (Per- and polyfluoroalkyl substances), SCCPs (Short-chain chlorinated paraffins), phthalates, heavy metals, and bisphenols in plastic production and the manufacturing of plastic products poses a considerable challenge throughout the plastic lifecycle<sup>7 8</sup>. These substances are known to be persistent, bioaccumulative, and toxic. These chemicals are associated with a range of health problems, such as cancer, endocrine disruption, and developmental issues.

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1 <https://www.oecd.org/environment/global-plastic-waste-set-to-almost-triple-by-2060.htm>

2 <https://oceanconservancy.org/blog/2021/09/15/worlds-plastic-pollution-hotspots/>

3 <https://www.sciencenews.org/article/microplastics-human-bodies-health-risks>

4 <https://www.aamc.org/news/microplastics-are-inside-us-all-what-does-mean-our-health>

5 <https://www.sciencealert.com/common-plastic-additives-may-have-affected-the-health-of-millions>

6 <https://medicine.duke.edu/news/duke-researchers-aim-discover-how-plastic-additive-combinations-impact-health>

7 <https://www.ciel.org/the-toxic-impacts-of-plastic-across-its-lifecycle/>

8 <https://www.unep.org/topics/plastic-pollution/chemicals-plastics>

The recent PlastChem report<sup>9</sup> emphasizes that plastics may contain a mix of more than 16,000 different chemicals. This marks a significant increase from prior estimates<sup>10,11</sup>, highlighting the complexity of plastic composition. At least 4,200 (or 26%) of these chemicals are highly hazardous to human and environmental health. These chemicals are present in various types of plastics. More than 400 chemicals of concern were identified in each major plastic type tested. This includes common items such as food packaging, which can leach harmful chemicals into food, homes, the environment, and human bodies. The report notes that no plastic can be classified as safe. This underscores the need for strict regulation and safer alternatives. The economic impact of plastic pollution is significant and complex, influencing various sectors and facets of society. For instance, marine plastic pollution leads to an estimated economic loss of \$500 billion to \$2.5 trillion annually due to its effects on aquatic ecosystem services<sup>12</sup>. This encompasses the provision of fisheries, aquaculture, and materials for agricultural use, as well as the cultural and recreational value of marine environments. Effective regulation of plastic chemicals is crucial for comprehensively tackling the plastics problem. These data points highlight plastic chemicals' extensive and hazardous nature, reinforcing the necessity for robust policies and regulations to protect public health and the environment.

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- 9 <https://www.plasticpollutioncoalition.org/resource-library/plastchem-state-of-the-science-on-plastic-chemicals>  
10 <https://wedocs.unep.org/handle/20.500.11822/42427>  
11 <https://www.unep.org/resources/report/chemicals-plastics-technical-report>  
12 <https://www.ncel.net/articles/first-in-science-the-economic-impacts-of-plastic-pollution/>

## Contacts

Health and Environment Justice Support (HEJSupport)  
info@hej-support.org

Follow us on LinkedIn:  
<https://bit.ly/3A0L93C>

HEJSupport Website:  
[www.hej-support.org](http://www.hej-support.org)

More information about the project:  
[www.hej-support/eecca-plastic](http://www.hej-support/eecca-plastic)



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